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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,863	07/20/2001	Paul E. Dresens	0100.2016-000	8766

21005 7590 10/18/2005

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EXAMINER	
JIANG, CHEN WEN	

ART UNIT	PAPER NUMBER
3744	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/909,863	DRESENS ET AL.	
	Examiner	Art Unit	
	Chen-Wen Jiang	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28,51,56-64 and 76-78* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,20-28,51,56-64 and 76-78* is/are rejected.

7)☒ Claim(s) *19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20041228,20050803*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/3/2005 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "based on he operation of a particular refrigerator with respect to the other refrigerators" and "the measuring the demand of individual refrigerants depends on that refrigerators particular operation") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,2,3,5,15,16,17,18,6,7,8,9,10,11,13,14,22,23,24,25,26,27,51,56-64 and 76-78 are rejected under 35 U.S.C. 102(b) as being anticipated by Eacobacci Jr. et al. (U.S. Patent Number 5,775,109).

Eacobacci Jr. et al. disclose a method for regulating the cool down of multiple cryogenic refrigerators supplied with compressed refrigerant from a common compressor. A group of helium compressors are sometimes manifold together to act as a single source of refrigerant to

multiple cryopumps. Fis.1 show the prior art cryogenic refrigerator and Fig.3 shows the distribution system. Referring to Fig.3, a plurality of refrigerators 110 receive compressed helium from a single compressor 112 through a manifold 114. A network terminal 116 is electrically coupled through a control line 118 with each of the refrigerators 110. The network terminal 116 is capable of measuring the temperature of each of the refrigerators 110 and determining whether any of the refrigerators 110 have a temperature below a triggering limit. The network terminal 116 governs the refrigerators within the plurality 110 to increase or decrease the supply of helium that they process depending upon whether they process a temperature above or below the triggering point. **The system determines actual refrigerant demand based on the capacity of the refrigerator** (determining a demand of the refrigerant by each of the plurality of refrigerators). Typically, each refrigerator will receive a prorated portion (flow rate; see examples) of the gas supply which can be calculated (determining, for each of the refrigerators, an allocation of the refrigerant based on the availability of the refrigerant, the aggregated demand and the individual needs of the refrigerators) as the refrigerator's maximum consumption (determining a demand of the refrigerant by each of the plurality of refrigerators) multiplied by the ratio of the available supply (determining an available quantity of the refrigerant) over the present aggregate maximum consumption of all refrigerators (aggregating the demand from refrigerators). *The "prorated" calculation is based on the available quantity and required quantities, therefore. The "prorated" is shown and disclosed allocation computed as a portion of the determined available quantity.* Redistributing the allocation of the refrigerant over time by determining the allocation of the refrigerant is also shown in the example by adding the third refrigerator. The flow rate computation (scfm) are shown and disclosed in these

examples (cols.5-6) and also disclosed in column 4. The governing of cryogenic refrigerator includes adjusting the speed of the displacer.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 4,28 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eacobacci Jr. et al. (U.S. Patent Number 5,775,109) in view of Derosier (U.S. Patent Number 5,551,248).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, increases the computed available quantity of refrigerant is based on the primary reference '109 and the slave controller and incrementally increasing control parameters is relied on the second reference '248. The expansion valve claimed in the second reference '248 provided more limitation than Applicant's claims.

Eacobacci Jr. et al. disclose the invention substantially as claimed. However, Eacobacci Jr. et al. do not disclose a slave controller and incrementally increasing control parameters.

Derosier discloses a slave controller and incrementally increasing control parameters in the same field of endeavor as an obvious option in the system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Eacobacci Jr. et al. with a slave controller and incrementally increasing control parameters in view of Derosier.

6. Claims 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eacobacci Jr. et al. (U.S. Patent Number 5,775,109).

Eacobacci Jr. et al. disclose the invention substantially as claimed. Dependent claims 12,21 does not appear to contain any feature which, in combination with the features of any claim to which they refer, involve an inventive step since they are also partly revealed in the prior art or they show mere constructional details which would be within the capabilities of the person skilled in the art. Also, upon a close review of applicant's specification, it appears that the claimed parameters do not have any criticality and/or lead to any new and unexpected results. Therefore, it would have been obvious to one of ordinary skill in the art to have selected the claimed parameters for the calculation in the control stage since these particular parameters provide control calculations that are no better or provided improved performance over that which is commonplace in the prior art.

Allowable Subject Matter

7. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner